THE

HORTICULTURIST.

VOL. XXI.....JUNE, 1866.....NO. CCXL.

VENTILATION.

BY A. D. G.

If we mistake not, this subject has already been touched upon in books and papers, but perhaps it will bear another citing. Much as has been said about it, few persons are sensible of its importance. Many are careful to provide excellent food and clothing for themselves and their families; their houses must be handsome and filled with elegant furniture, but as to the quality of the air they inhale, they give themselves little concern.

Providence has surrounded us with an ocean of pure air fifty miles deep, but we bottle up a portion of it and seclude ourselves within it, rendering it poisonous, and then ask one another if this is not domestic comfort? If we exclude air entirely from the lungs longer than three minutes, death will surely follow, but impure air may be breathed for many years, and the patient continue to live. Bad air is a slow poison. That's the trouble; if it only did its work quicker, and in a more striking and conspicuous way, men might be deterred from recklessly breathing it. Those who habitually inhale it are rendered insensible to the sweetness of a pure atmosphere; their taste becomes as vitiated as the air in which they dwell.

If any one doubts the importance of ventilation, we beg to remind him of a few facts. Science tells us that atmospheric air is composed of oxygen gas and nitrogen gas; the former being a supporter of combustion and of animal life, the latter not such a supporter, nor yet positively destructive of either; its office in the animal economy seeming to be to dilute the oxygen which in its pure state would act too powerfully on the system. In the process of respiration, while the nitrogen is given off from the lungs essentially unchanged, the oxygen unites with the carbon of the blood, forming carbonic acid—the same gas which is produced by burning charcoal in the open air—and this poisonous substance constantly being exhaled into the rooms we occupy, it would seem important to dispose of as soon

Entered according to Act of Congress, in the year 1866, by Geo. E. & F. W. Woodward, in the Clerk's Office of the District Court of the United States, for the Southern District of New York.

as possible. To this it might be added that more or less excrementitious matter passes off continually by insensible perspiration through the pores of the skin, which is of the same deleterious character, and urges the same plea for ventilation.

We are told, again, that "every twenty-four hours, there flows to the lungs sixty hogsheads of air, and thirty hogsheads of blood."* What is the design of this? To purify and vitalize the blood. Now, as the health of the body depends largely upon the purity of the blood, and this last upon the purity of the air, we may estimate the importance of looking well to the quality of what we every moment breathe.

And these conclusions of science are confirmed and illustrated by daily observation and experience. Whence come the pale and sallow faces, languid eyes, headaches, catarrhs, debility, coughs, and consumptions which we continually meet with? Whence, chiefly, except from long confinement in the unwholesome air of unventilated houses? And yet we wonder what can be the matter. Are not our dwellings warm and comfortable, and perhaps genteel? We Americans are less robust than our English cousins, men and women. Travelers from abroad, while acknowledging the delicate hot-house beauty of our young ladies; yet tell us our wives and daughters look sickly and frail beside the ruddy, round, elastic figures of their own fair ones. English women live more out of doors, and ventilate their houses better than we do.

In the great majority of our school-houses, work-shops, court-houses, hotels, railway-cars, concert-halls and churches, the air is unfit for breathing. As a general rule, the windows and doors are kept closed, and the oxygen of the air being rapidly consumed by the burning of many lamps and fires, and by the inspiration of numerous occupants, it is impossible for one to remain long in such places without serious injury to his health. Whence the nausea and headache next morning after concerts and lectures? Whence much of the lassitude, listlessness and irritability of scholars and teachers? Whence the dullness of sermons and the drowsiness of congregations? True to life is the story of the old Scotch minister who, greatly troubled with the inattention of his auditors, preached to them a series of discourses on "The Sin and Shame o' Sleepin' in Kirks," but without any appreciable improvement of their manners; when, at length, ordering the sexton to partially open several windows during service, the result was all that he could desire.

Time was when our dwellings and public buildings were so constructed that ventilation came as a matter of course. The doors and windows rattled with their looseness. In private houses, the broad fire-place sucked up and carried off the foul air as fast as it was generated. Then, too, men and women lived much in the open air, and were not afraid of it. Now, we make our doors and windows air-tight; our rooms over heated by air-tight stoves and furnaces; fire-places are seldom seen, or are made for ornament, and closed up with fire-boards; and our food is cooked in air-tight kitchen stoves. These modern improvements cost us dearly, and must continue to do so until we conform more to the laws of health.

In sugesting a few hints as to the best *methods* of ventilation, the writer will speak only of those which may be applied in winter; for in summer, this matter will mostly take care of itself.

To provide fresh air for a dwelling-house, some would say, knock out a panel from every door, and a pane of glass from every window. Others, less heroic, would propose that every door be set ajar often during the day, and that rolling blinds be inserted in every fire-board, to be opened and closed at pleasure. It is an excellent arrangement, also, to insert a register, or a valve like Dr. Arnott's patent, in the chimney-breast near the ceiling, which can be controlled by a simple pulley and cord.

But it is important to bring in a constant supply of fresh air, as well as to expel that

* "Uses and Abuses of Air," by Dr. Griscom, p. 29.

which is vitiated by use, and to introduce it in such a way as not to let in also the influenza. When grates are used, it is customary sometimes to introduce a current of out-door air into a hollow space in the chimney, behind the fire, where it becomes warm before entering the room. But for the majority of country-houses, grates are the exception, and close stoves the general rule: how, then, can we ventilate rooms warmed by stoves? One simple method is this:—Surround a common iron stove with a neat Russia iron case, leaving a space of six inches between the two, and cover the whole at the top with an ornamental grating. Connect this apparatus with the air out of doors by a tin conductor four inches in diameter, leading from a cellar window along under the parlor floor, and then up through the floor into the open space before described. A damper should be inserted in this pipe, to regulate the amount of air brought in. By some arrangement like this, we can introduce a constant supply of pure air, which, when warmed in the air-chamber around the stove, will flow out in a genial current through the perforated top into the apartment. It is to be supposed, however, that a register or valve is also provided in the chimney flue for carrying off impure air as fast as fresh is brought in. The method thus stated, is the same in principle as "Clate's Patent Ventilating Stove," which is used in some of our large public schools.

The grate, or the close stove arranged in the above manner, will answer well when only one or two rooms are to be heated; but when a whole house or large public building is to be warmed and ventilated, The hot-air furnace will do the work better. (We speak not now of warming by steam or hot water: for these methods are too expensive for general adoption, and where used do not seem to give entire satisfaction.) The hot-air furnace, properly constructed, with gas-tight joints, and a large copper pan in the air-chamber for evaporating water, provides a constant supply of fresh, summer-like air, and sends the wholesome current, hour after hour, through all the building.

It is, however, an essential requisite of this method of warming a house, that provision be made for a current of air to flow out of every room, as well as one to flow in. Indeed it is difficult to warm a house in this way, unless some such provision is made. Can you blow wind into a bottle, without first displacing an equal portion of the air within it? * Properly to ventilate a house warmed by a furnace, every room should be provided with a ventilator leading into the chimney-flue or into a ventiduct carried up by its side. For, if not so provided, not only will it be hard to force fresh air into the rooms, but that which is forced in will be drawn down again through the registers into the furnace-chamber, whence it will be returned again and again to the apartments for repeated respiration. This is continually occurring in multitudes of houses, and public buildings.

The opening referred to, for the escape of impure air, should be on the side of the room opposite to the register, and should be as near the floor as practicable. If it is made near the ceiling, the freshly-heated air rising at once to the top of the room will pass off through the ventilator and be lost, leaving the cold and impure air near the floor unwarmed and undisturbed; whereas, if the opening were made near the base of the chimney, then the newly-warmed air, after first rising to the ceiling, would descend and drive the cold air along the flue up the chimney or ventiduct, and so facilitate

* Soon after the erection of the splendid edifice for the Smithsonian Institute, it was found impossible to warm one of the large halls of the building, so as to make it comfortable. The windows and doors were made air-tight, and the large furnace in the basement was driven up to red heat. Still, the air in the lecture-room remained dull and cold—the thermometer indicating only from 45° to 50°. After some time, a man of common sense hearing of the difficulty, called for an auger and hand-saw, with which he soon cut a hole in one corner of the floor, about eighteen inches square. Immediately, there was a change in the air—a healthful circulation commenced, and in half an hour, the mercury ran up to 75°!

both the warming and the ventilating of the apartment. The escape of the vitiated air up the chimney flue would be helped by kindling a small fire on the hearth or in the grate. Indeed, this arrangement—the furnace and a fire on the hearth, constitutes, to our mind, the best known method of warming and ventilating a dwelling-house: the furnace affording a comfortable warmth to the halls and rooms of the entire building, while the ruddy light in the fire-place gives a cheerful, homelike expression to the apartments occupied, which can be gained in no other way; and both together furnishing ample ventilation.

Let it be added, finally, that while specifying these several plans for ventilating buildings, we have desired to suggest correct principles, rather than to advocate particular methods.

DESIGN IN RURAL ARCHITECTURE—No. 15. A SMALL STABLE.

G. E. HARNEY, ARCHITECT, COLD SPRING, PUTNAM COUNTY, N. Y.

We offer the readers of the Horticulturist this month a design for a small stable. It has accommodation for two horses and a cow, besides a separate apartment for carriages, and another smaller room for harnesses, &c.

The carriage room measures 13 feet by 22. Each horse-stall is 5½ feet wide, and 9½ feet long to the rear of the stall partition, or 17 feet to the partition of the carriage-room.

The stalls are provided with cast iron

Fig. 70.—*Perspective.*

mangers and iron hay-racks each secured to opposite corners of the stall. We consider these iron fixtures the best in use, but care should be taken to keep them always coated with some kind of paint, to prevent injury to the horses mouths in winter, when they are liable to become frosted.

The cow-stall is 4½ feet wide, and is provided with a manger and some suitable fastening apparatus; for the latter, we prefer the ring and chain, though the old-fashioned stanchion is recommended by many.

The floors of the stalls should be laid

with smoothly-planed locust joists, slanted towards the gutter just enough to take away the water—say two inches in the 9½ feet.

The harness-room is provided with hooks for harness; a closet to keep brushes, soap, oils, medicines, &c., &c.; and a small stove to heat water for washing harness, &c.

There is a rain-water cistern, built with brick and cement, in the yard, near the rear of the stable, and this, taking water from the roof, by means of tin conductors, supplies all the water required.

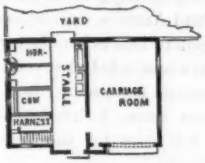

FIG. 71.—*Ground Plan.*

Rain water is much better for stock than spring water. The pump is inside the stable, as will be seen in the plan, and empties into a trough, convenient to which are chests lined with tin, for holding oats and meal, &c.

A ventilating shaft rises from the stable-room to the ventilator shown in the sketch, and this, with the small windows in the head of each stall, provides sufficient circulation of air. In the summer, the doors may be taken off their hinges, and gates with locks substituted in their place. The little windows spoken of are placed *above* the heads of the horses—say seven feet from the floor, and are opened by means of pulley and rope.

At the rear of the building, a door opens into a yard enclosed by a high fence; and, if there be a desire to make the establish ment quite complete, there may be bu lt around this yard a range of buildings for poultry, pigs, &c., and open sheds for wagons and carts. Such a range of buildings we shall present at some future time.

This stable is built of wood, and covered with vertical boarding and battens; the roof is covered with slate; the doors all have simple hoods as well as the windows, and the glass for the latter, we would have set in diamond-shaped panes, which, at a little or no extra expense, heightens wonderfully the artistic effect of such a building as this.

Paint the building a warm cream color, the eaves, and window-trimmings, and doors considerably darker; plant a good many trees around it, and set a flowering vine here and there, so as it may run along its walls; take good care of the grass, and keep the drive-way well rolled and clear of weeds, and then we think the effect of the whole will be rather pleasing than otherwise.

This stable will cost at present prices about 1,200 dollars.

RAISING GRAPE VINES FROM SEEDS.

BY A. J. CAYWOOD, POUGHKEEPSIE, N. Y.

MR. MERRICK, in his interesting article on "Grapes in '65," in your February number, asks for information in relation to expediting the germination of grape seeds. When I came to this, my mind recurred to my labors for the past sixteen years, in trying to discover some of the enjoyments and luxuries by Nature hidden, but designed to be revealed in time, as necessity demands. The lawyer says he wants the worst of his client's case first, and I would hint to Mr. Merrick that his chances of failure are far greater than those of success.

All those who would produce valuable varieties of fruit must expect many disappointments, unless there is a more perfect system of hybridization discovered. I think I have tried all the appproved modes of

fertilization, and from the thousands of vines I have raised, many of which I have not abandoned until they were five years old, only two are considered valuable. One is a hybrid of the Diana and Delaware; the other was raised from Concord seed, not hybridized, at least by any effort of mine.

You may call this poor luck, but I think all others who have experimented with grape seeds extensively have shared the same fate, Mr. Rogers being an exception. I am well aware that, in some cases, good varieties have been produced by the first attempt at crossing; and the process has been continued by the same person for years without obtaining another. I suppose this want of success is the result of many causes. The incongruity which may exist between two of the strongest varieties might lead to degeneracy—the pollen of one flower being in a more advanced stage than that of the other; one being naturally stronger than the other; earliness and lateness; the difference in form of flower or fruit: and other differences in the same family. The effect we can see; but why crossing in the vegetable kingdom tends to retrogradation we cannot fully explain. It is barely possible that from a single seed, planted without any pretensions to hybridization, might be produced a better variety than any we now have; while thousands might be hybridized, and all prove worthless. By this, you will perceive that I do not fully believe the doctrine that the blossoms of the grape cannot be fertilized unless it is done scientifically. We have now, in several instances, the characteristics of two distinct varieties, so completely blended in the chance seedling, that it is no longer a question whether they may become hybridized naturally. If Mr. Rogers should succeed in the future as he has in the past, I will conclude that there is not so much uncertainty about grape seedlings after all, and that he has discovered a more certain method of hybridizing.

It is not my design in the foregoing to discourage Mr. M. in the planting of seeds; on the contrary, I would advise him, as I have others, to do it. If all who own land should devote two feet square to seedlings, we would, in a few years, have what the present efforts would not bring us in as many centuries. Although the prospect would not be flattering to the individual, the general effect would be great. Whoever, by his indefatigable energy, develops some of the good things now in waiting, confers a lasting benefit on mankind.—Downing, Kirtland, Wilson, Hovey, Bull, Allen, Rogers, Wilder, Grant, Brinkle, Van Mons, Rivers, Le Roy, and a host of others in Europe and America, will be looked upon by future generations as benefactors of their race. I have concluded at several different times to save no more seeds; but, when the grape season came, I, irresistibly, would prepare a few more for the next spring's planting.

I have derived much pleasure from watching their growth and development. It is a game of chance, which all may play at, and do no violence to the moral law; a recreation attended with novelty and hope, which well pays its way, even if the goal is never reached.

To Mr. M. I would say, grape seeds should be put in earth in a pot or box, immediately on being taken from the fruit, and the vessel buried one or two inches from the surface, in order that they may be frozen during winter. A box should then be prepared, of suitable size, ten or twelve inches deep, placed in a hot or cold glass-house, and filled with soil properly prepared, within three inches of the top.—About the 1st of April, the contents of the pot, seeds and earth, should be evenly spread over the surface, after having been well mixed. Over all, a quarter of an inch of good soil should be sifted, being careful to exclude the earth-worms, as they will destroy a portion, if not all, of the young plants. This may be done by taking the earth from the surface as it begins to thaw in the spring, the worms being below the frost; or sift the earth if later in the

season. A portion of the young plants will damp off. If they should yet be too thick, thin out the smaller ones, not allowing them to be crowded. When they strike the third leaf, those taken out may be replanted; the vines remaining in the box will make from three to fifteen feet the first summer. Those grown out doors will seldom ripen any buds before the early frost kills them; they may also be successfully grown in hotbeds. Some seedlings will bear at the age of three years, but many more will not until four. As soon as the cluster of blossoms is sent forth, and before the cap of each little flower falls, its gender can be easily decided. I say gender, as we here call the non-bearing vines males.

The peduncle of the fruitless vines is very small, not larger than a cambric needle; clusters very large, and highly perfumed. You must not expect to see grapes on a cluster of this description. When the cap bursts, a small yellow knot will appear where there should be a grape. The entire cluster will fall, and the vine might as well be destroyed. If it does not bear the first time it blossoms, it will never bear after. The cap may be removed, and its character ascertained, a week before the young grape would be sufficiently developed to throw it off.

Now, Messrs. Editors, I hope you will not think these unclassified jottings the communication I have long promised you on this subject, but will try at some future time to redeem my promise.

DESIGN FOR A HOUSE FOR DRYING FRUITS.

BY. J. C. HOBSON, CARDINGTON, OHIO.

THE following sketch is of a building of moderate dimensions, 4x12 feet, and five feet in height, set upon a wall of brick or stone twenty inches high; and, to obviate the necessity of going inside when heated up for drying, it is constructed with two tiers of drawers on either side, 23 inches by 5 feet, with slat or wire bottoms · each one made to slide in and out independent of the rest, and each tier enclosed with double doors. The building is heated by means of furnaces extending from either end, and communicating with the flue in the centre.

By reason of the drawers meeting over the furnaces in the middle, the heat in rising

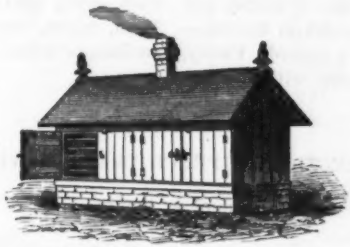

FIG. 72.—*Drying House.*

is compelled to pass through them, thus the fruit is dried faster than by the usual mode of placing it on shelves against the wall of the house.

The number of drawers may be increased to double the amount represented in the drawing if necessary, which would make them hold a considerable quantity of fruit, say from twenty to thirty bushels.

The building should be constructed of light timber, may be weather-boarded horizontally or vertically, and made ornamental or otherwise, according to the taste of the owner.

HEARTS' PIPPIN.

Some years since, the writer received this variety from Charles Downing, Esq. It is not of the highest flavor as an eating apple, but the flesh is very tender, of a pleasant, mild, sub-acid taste, and cooks among the best. The tree is a good bearer. We find no published description of it, except in the *Western Fruit Book*. Fruit, medium size, roundish, flattened at ends, oblique. Color, pale yellow, with suffused shades of whitish yellow, and a faint blush cheek in the sun.—Stem medium, generally curved. Cavity, regular, russetted. Calyx with five distinct, erect, open segments. Basin, deep. Flesh, white, very tender, juicy. Core, medium, or below. Season, November.

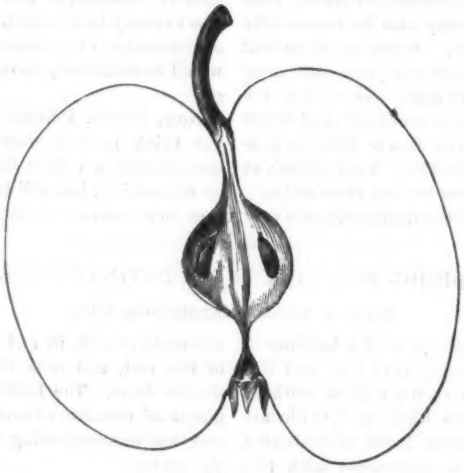

Fig. 73.—*Hearts' Pippin.*

PROTECTION OF PEACH TREES IN WINTER.

BY JOHN H. JENKINS.

We must resort to some protecting system for peach culture, or be disappointed, year after year, by late spring frosts—at least, such has been our situation. For four years, our peach crop has been smitten by May frosts; and, if we do not grow our trees in the future so that we may protect the buds from hard winter freezing and late spring frosts, we may expect nothing but disappointment for the next four hundred years.

The system is simply as follows:—Buy only the best trees, one year from the bud, and if they havn't low heads, cut back to 18 or 20 inches from the ground, as shown in Fig. 74. Plant the tree, in good soil, of

course, mixing with the soil one-half bushel of leached ashes to each tree. Let no stock run in the orchard without the trees are enclosed. The first Fall after planting the tree ought to appear as shown in Fig. 75. The winter preceding the second spring, make, or have made, or go to the woods and cut them, a lot of stakes made from boards 2½ to 3 inches wide, and 3, 3½ to 4 feet long, sharpened at one end, and with an inch hole inclining at a small angle near the upper end; drive in a strong pin, and you have them made. We will suppose the tree has made from three to five strong side-branches the first summer, within 20 inches from the ground, and has sent up a strong leader.—We commence this the second spring with our horizontal training, by bending down

Fig. 74.

Fig. 75.

Fig. 76.

each side-branch, and securing it at about two feet from the ground with these stakes. The tree has then the appearance of Fig. 76. Of course we cut back, to form the tree to suit our taste, and cut out unnecessary limbs. We let the tree grow, keeping the worms away, hoping to have a good growth by Fall.

The next summer we may expect some fruit—a pretty good crop, provided we insure the life of the buds. Sometime in November, or before hard freezing, we bend down the side branches, so that they will rest on the ground, and secure them by driving down another stake near the end of the branches, and cover entire with soil,

Fig. 77.

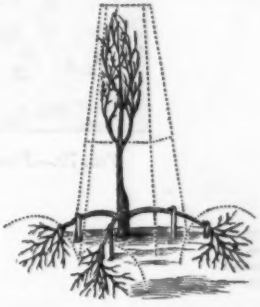

Fig. 78.

say from 1 foot to 15 inches deep, owing to the climate, of course. Then crowd the leader with its branches into a long box, resting on four legs, according to Mr. Palmer's plan; or, what is cheaper and as good, make straw bands, twisted, and wrap closely around the leader, drawing in the side branches as you proceed, until it resembles Figure 77. Figure 78 represents the tree the winter of the second year, the dotted lines

over the branches showing the earth; the dotted lines over the leader shows the box. Allow the tree to remain in this situation until the middle of April, or thereabouts, when the soil is to be removed from the branches, and the second stake pulled up.—The branches will then rise, and be about three feet from the ground; remove the box or straw from the leader; the tree will then bloom so late as to insure the fruit crop.

East Bethlehem, Washington Co., Pa.

PLAN FOR LAYING-OUT A SQUARE ACRE LOT.

BY E. FERRAND, DETROIT, MICH.

This garden contains everything that can conveniently be established on an acre lot. The stables and out-buildings are separated from the main place by two gates; one, M, opens the way to the dwelling; and the other, N, leads into the garden. There is a passage, O, to the street, entirely hidden by the thicket alongside of it, so that hay, manure, &c., may be taken in and out without interfering at all with the cleanliness of the place. The shrubbery has been so disposed as to conceal the limited dimensions of the place. The greenhouse is conveniently situated near to the house, and a view of it is afforded from the street. The walks around the kitchen garden are planted with dwarf fruit trees, and the space devoted to that garden is sufficiently large to provide a family with the usual vegetables and small fruits. There is a vinery, E, and a trellis of native grapes separating the ornamental from the vegetable grounds. The yard, L, is shut by the gates M and N, and at the entrance of passage O on the street, so that horses or other animals may be let loose in that yard without fear of their running away, or through the garden.

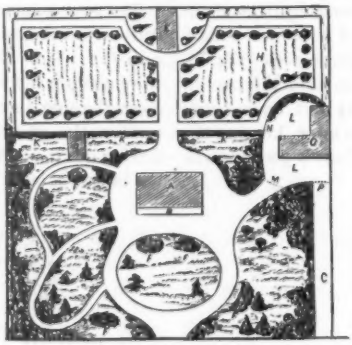

Fig. 79.—*Plan of Square Acre Lot.*

A Dwelling.
B Piazza.
C Stable, Barn, and other Out-Buildings.
D Greenhouse.
E Grapery (house).
F Flower-beds.
H Kitchen Garden, with dwar fruit trees and smal fruits.
K Trellis of Grape-Vines.
L Yard.
M Gate.
N Gate.
O Passage from the Barn to the Street.

WHARTON'S EARLY PEAR.

This pear was distributed many years since by that zealous horticulturist, A. H. Ernst of Cincinnati, but since his death, little or nothing has been heard of it. Can Mr. Downing, or Wilder, etc., tell us aught of it? Here is an outline of it.

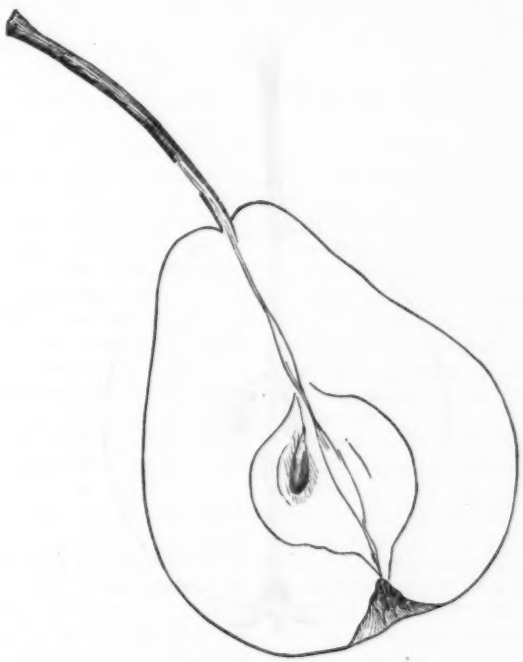

Fig. 79.—*Wharton's Early Pear.*

The tree is described as a strong, healthy grower; the fruit above medium; yellowish green, with more or less of russet, and flesh melting, juicy, sweet and high-flavored; bearing well, and ripening middle of August.

MARGARET PEAR.

In our March number we gave an illustration and description of one—"Mary"—of two new pears originated with Mr. Christopher Wiegel, Cleveland, Ohio. We now give outline, figure and description of number two, which he desires named *Margaret*. Its history is the same as Mary's, and given in our March number.

Description.—*Size*, medium. *Form*, oblong, ovate. *Stem*, one to one and a half inches; straight; inserted without depression. *Calyx*, large, open, with long, reflexed

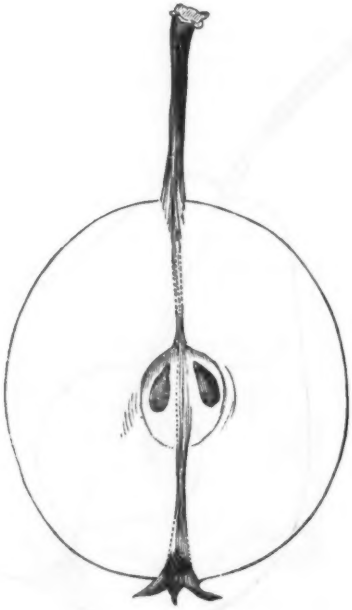

Fig. 80.—*Margaret Pear.*

segments; without basin, but irregular, uneven surface surrounding. *Color*, lemon-yellow ground, when fully ripe; mostly overspread with deep, dull-red, small russet dots, with occasional small russet marblings and patches of russet; where the surface is not reddened the dots appear green underneath the skin. *Flesh*, white, finely granulated, juicy, vinous, sweet, and free from astringency. *Core*, small. *Seeds*, dark brown. Season, last of July, and early August.

NOTES ON THE APRIL NUMBER.

THE ENEMY.—Come, come, good editors, you must not lay all the blame of a scarcity of apples on the codling moth, forsooth.—Because, as you say, apples are dearer in New York market than oranges, must it all be attributable to the depredations of insects? Stop a minute. You say New Jersey was once famous for its fine fruit, but now for its *want* of fine fruit. I am not a Jerseyman, but I have had some whole-souled friends in that State, and I feel like, in a short way, taking up the cudgel in her behalf, and say, therefore, that you are perhaps mistaken, and your enthusiasm for once has led you to erroneous conclusions. I may not say that New Jersey has produced *perfect* apples this past year, but I may say that you are making surprising assertions. In, say, 1832, and onward to 1840, very few perfect apples were grown in the New England States, but the past year their apples have been more perfect than in New Jersey, or onward to Ohio. Michigan, as yet, and the Canadas, are comparatively clear of the codling moth, and their fruits have this year commanded prices over the above-named intermediate space. Now, while I shall go with you heart and hand toward perfect extinction of the insects, and would urge, as you do, "the importance of prompt and energetic action towards the destructipn of the apple moth, and all other insects injurious to the horticulturist," I cannot agree with your prophetic vision, "that of no fruit will we ever have an abundance, but with each year an increasing scarcity." I have looked carefully over fruit-growing more than forty years, and find that occasional seasons occur of adversity in the products of the earth, to be followed soon, if not directly after, with profuse abundance. I will, therefore, as an offset against your prophesy, say that I believe the coming year will be one of great abundance in product of the apple and pear, and that, as a feature, there will be less injury from insect depradations than for several years past.

I am with you in urging attention of fruit-growers to the study and habits of insect life, that they may the better know how to protect their own interests, for it is the interest of every fruit-grower to ripen as perfect a crop as possible; and the more he knows of the soil, the habits of the tree and of the insect, and diseases attendant upon tree and fruit, the better is he enabled to guide his labors toward profitable results.

DESIGNS IN RURAL ARCHITECTURE—No. 13.—In certain locations, I think that, architecturally, the appearance of this cottage would be very pretty. Its effect on paper is certainly good, and there does not appear any useless ornamentation; yet most who build at a cost of $1,800 to $2,000 look for more room, and the rooms of larger size than are here portrayed. I think the house could be spread out on ground plan, and thus improved, at a comparatively trifling cost.

MILDEW AND GRAPE CULTURE.—Mr. Saunders is a man so conversant with grapes, and withal so observing, that it is hardly to be expected he can err—but "ain the best aft gang aglee," and I may be permitted to record, that while measurably agreeing with his convictions, that "atmospheric influence is the cause of mildew," I cannot submit to the covered trellis; because I have seen mildew underneath it; and also abundantly on vines covering trees.

DIAGONAL TRAINING IN VINEYARD CULTURE, No. 2.—With the writers opposition to "stopping and pinching in," *i. e.*, severe summer pruning, I fully agree, and believe that more of injury than good to our native grape vines has been caused by following old country dogmas in regard to this practice: The distance apart of vines I however think is not sufficient, unless it may be such varieties as Delaware, Rebecca, etc. If we

may judge from all our readings the advantage to the grower is obtained by placing his strong-growing vines, as Concord, etc., at distances of eight or more feet apart, rather than at less than six feet, as here advised.

Abbot Pear.—I am glad to see this good, and handsome pear brought again into notice. I have grown most beautiful, as well as good fruit of it; and were it not for one single fault, viz., that of ripening up too fast, it would be one of the most desirable in all choice collections.

Masten's Seedling Apple.—Judging from the description, this must be a most remarkable apple, but perhaps a little too large, and open core. I should like much to see the fruit, and must write Mr. Masten at proper season for samples.

Cleft Grafting.—A timely article, wherein the writer has remembered that all the readers of the Horticulturist are not experienced in all the practical arts of which its pages treat. I would add, that the old practice of using grafting clay as a wrap over the tie of grafting wax is good as a preventative to drying.

Report on Grapes in Missouri—1865.—A most valuable record! I am a little surprised at the conduct of Anna and Cuyahoga, for I have been impressed with an idea that they would prove valuable in Missouri. I would like to ask Mr. Husmann, of whom he procured the *Martha*, as I suspect there are two grapes sent out under this name. Again, I would like to ask, if Mr. H. has Rogers No. 3—and if so, what observations he made on that. I have a belief that it will make a fine wine, and tolerable table grape for his section.

Gardens and Parks of Germany.—All travelers over the section traversed by this writer, join in their praise of the roads, and road-side trees. The example of planting fruit trees by the road side has been advised in this country, and while we acknowledge its beauty and usefulness, we are and perhaps ever will be, a too roving and restless people, with too many regardless of laws or property to make the practice desirable.

As we now are, these very peasants, who so carefully respect the ownership of these road-side-trees in Germany, no sooner arrive here than their first onslaught is on any and all property not protected by fence, dog, etc.

Time perhaps, will be when it may be advisable and safe to plant fruit trees on road-sides, but at this stage of our progress I think we had best stick to our elms, maples, etc., for our street shades.

Reuben.

HORTICULTURAL MATTERS AT THE HAWAIIAN ISLANDS.

FROM OUR OWN CORRESPONDENT.

In the tropical regions, the vegetation is always of a greener and fresher verdure, the foliage more luxuriant, and the leaves more beautiful in shape and texture, than in your Northern climates—even in the summer months—for the varieties are more numerous, and each possessing some marked and peculiar character, interesting to the botanist and tourist, and every true lover of nature. The frequent, light showers of rain, which occur almost daily, in the warm latitudes, seem a wise dispensation of that over ruling Providence for the beauty and preservation of the foliage, and vegetation, which otherwise would scorch and dry up under the hot rays of the sun.

There are a large variety of flowering trees and shrubs in and about Honolulu, of every size and shade of foliage, beautiful and attractive to the eye of every tourist who visits the islands, a description of which, botanically arranged and classified, I will endeavor to give you from time to time, as my health may permit. Among them are some indigenuous to the country, and others, exotic in character, which have

been brought here by the early settlers, or introduced through the efforts of the Royal Hawaiian Agricultural Society, by Dr. Hildebrand, who is now in China.

The ostensible object of Dr. Hildebrand's mission to China and India, where he has been since last summer, was to obtain suitable laborers for the plantations, having received the appointment of Royal Commissioner of Immigration. The Royal Hawaiian Agricultural Society, to improve so valuable an opportunity, at the same time, made an appropriation of $500, for the purpose of providing, through Dr. H., seeds, plants, shrubs, and fruit-bearing shrubs and trees of every description that are natives of China and India, and that have not already been introduced to the islands. From his thorough knowledge of botany and the sciences, as well as general information concerning packing and shipping plants, no one is better fitted for the important mission. There is every reason to believe, that by the liberal encouragement of the Hawaiian Agricultural Society, the mission will result in vast good to the islands, and by the exertions of Dr. H., a large and valuable collection of hitherto unknown plants and shrubs, and spice growing plants, and trees and fruits may find their way to these islands, where there are abundant tracts of fertile soil, suitable to their culture and growth, on an advantageous and beneficial scale, and their products in time be reckoned among the future resources of *Hawaii nei !*

Among the many beautiful trees I have seen, in the gardens, is one, in size and shape about the same as your Northern apple-trees, covered with beautiful foliage, very ornamental, and adorned with large, magnificent flowers—showy as some of your lilies. The seed pods are from six to eight inches long, of a rich dark brown color, and filled with seeds. I have procured some of these, which I shall send with the other collection I have made, and may make, to the New York State Agricultural Society. The tree would thrive well in any locality, I think, where the magnolia would flourish. I shall be pleased to hear of its successful culture in your State.

There is also a species of Acacia tree, which bears a seed-pod, long as your arm, and very tough and woody. They are quite a curiosity even here, and I shall try and send you one or two the first convenient opportunity.

In the beautiful, almost paradisal gardens of Dr. Hildebrand, and Judge Montgomery, President of the Royal Hawaiian Agricultural Society, may be seen hundreds of tropical trees, and shrubs, and vines, rich in foliage and bloom, growing luxuriantly, and in other and future letters, I may tell you what I have seen in my walks among the shady avenues and groves, around the trim beds, covered with a thousand gaudy and beautiful flowers, and in the wilderness of luxuriance of those charming Edens of Honolulu.

It is a matter of regret that the Royal Hawaiian Agricultural Society is at present in such a dormant state, owing to a want of proper interest and attention to the promotion of agriculture at the Hawaiian Islands. Sugar has been and is the great staple commodity, and the great trouble has been a disease called "*Sugar on the Brain.*"

The climate is unsurpassed, and the soil rich and fertile, and there is an ample field of encouragement for the horticulturist and agriculturist. The Agricultural Society, it is hoped, will again rise to view, where such a broad field is open for their glorious work. Fairs should be held annually, and meetings held for the discussion of various themes, and to report experiments. As civilization advances, agriculture should keep pace, and where *Nature* has done so much, man should certainly improve and cultivate, and the avenues of improvement should be opened wider and wider, that all who choose might enter in and study and enjoy. A department of agriculture here should be an obligation of government, and be fostered and protected, for upon this important arm, as is well known, depends in a great measure the weal or woe of any civilized country.

Honolulu S. I. Nov. 1865.

MY NEIGHBOR AND HIS GUN.

BY A. S. F.

CRACK! goes my neighbor's gun, and another sweet song-bird comes fluttering to the ground; and what for? Is it because the little songster has been in mischief? Has it been pilfering some stray head of rye, or a few grains of buckwheat? More likely neither, but probably it was searching for the eggs of the tent-worm on that apple-tree from which it fell.

Shall I call my neighbor a wretch for killing these innocent birds? It is certainly a wretched habit that some otherwise good people possess.

Why should these little pet friends of mine be killed? They are guilty of no crime, and how faithfully they work to bless mankind. How that gentle shower, in a warm spring day, opens their throats to warble forth the melody that should find an echo in every heart.

Sing and be happy, little birds, for thy Creator is also mine, and I know not which is most acceptable to Him—thy song or mine.

How few of those little friends do I meet when strolling in those grand old woods down by the side of Spring Creek.

Here are trees in which to build their nests; they are tall, and their thickly-woven branches would protect them from intrusive eyes. Here are deep, low vales, with a dense undergrowth—a fine cover for partridge and quail; yes, methinks a thrush might find a retreat here, and there is a lofty oak on which she might pour forth her song far above the surrounding trees.

I know she loves these high wood-marks for song, although she builds her nest so low. Why do I not hear her song? The day is fine, and it's the time of year for her sweetest note.

Where is the redbreast? No song from her this fine spring morn. 'Tis strange that not even the tat-too of the woodpecker or a note from the che-weep breaks the stillness of the fine old woods.

I hear no sound from yonder meadow Where is the meadow lark and bob-o'-link which have so often given forth their quaint song as they floated from fence to tree.

Is all nature dead, or asleep—which? Let us listen. There is a sound—a low buzzing which we hear through field and forest. It sounds like a coming storm, but it is not one that will refresh the drooping foliage of tree or shrub, for it is a storming host of insect-invaders.

The winged progenitor of the apple-worm is already dropping its eggs among the blossoms. The enemies of the pear, cherry and plum are among this invading host, and the rose, with all its beauty and fragrance, shall also perish, for I can hear the whetting of mandibles for its destruction. Shall these destroyers go on to their work of devastation without a check? Alas! we cannot stay their progress, for my neighbor's gun has either killed or frightened away my swift-winged friends who have ever faithfully beaten back the invading army from year to year.

Shall I expostulate with my neighbor and kindly request him to spare the birds? I have often done so, but he replies: "the law does not forbid it." He professes to be a Christian, and strongly orthodox, so I appeal to his Christianity. He replies that he is not forbidden to kill birds by the Ten Commandments. At last, in despair, I say: "A fig for your law or dogmas; have you no love for the little pets of your Creator?" "Most certainly he has, for he *loves* to *eat* them; a dozen robins," he says, "will make a fine pot-pie."

This morning, before the sun had shown his face, my neighbor was tramping to the woods, with gun across his shoulder, and a well-filled shot-pouch by his side. At noon I saw him coming home, and I ventured to say: "What luck, neighbor?" "Fine," replied he; "I got a splendid grey squirrel."

What a magnificent half-day's work for a farmer, whose land yields but ten bushels of rye per acre, because he has no time to haul out muck to enrich it, or to subsoil his shallow cultivated fields.

What a fine example he is setting for his son. I pray that he may not follow in the footsteps of his murderous predecessor.

Many and long are the black marks which I have scored against that neighbor of mine. There is a long mark under the word *squirrel*, and it brings to mind four little chattering pets, for whom I have cracked many a handful of nuts on a cold winter day, and placed at the root of the hickory tree they often visited. Then, listening, I thought I could hear them chatter their thanks for such a tree that gave them cracked nuts in winter. But one fine morning, crack! crack! crack! went my neighbor's gun, and now there is but one of my little pets that visits the hickory tree.

Where are those six chubby little quails that came every morning for the little handfull of wheat I tossed them, or to pick up the grass seed scattered in the barnyard, and all through the day I could see them running through the shrubbery, picking out the seeds from the weeds which had been carelessly left to mature.

My neighbor's gun told the tale. One fine morning and my little quails came no more for their handfull of wheat.

Dark as the score is against my neighbor, there are others as guilty as he, and may their Creator forgive them, for I cannot.

Woodside, N. J.

POTS SHOULD BE DRAINED.

BY JAMES COWAN.

Observing in the last Horticulturist another article, by our highly esteemed friend, Mr. Henderson, headed "Should Plants be Crocked," I beg leave, most respectfully to answer his modest question, by saying that plants should not only be "crocked," but all pots in which they grow should be thoroughly drained, it being, in my opinion, absolutely necessary to insure the specimen-grower complete success.

Mr. H. also remarks that it is not the pieces of broken pots and charcoal placed at the bottom of the pot that causes my success in plant-growing. I can assure him that it has a great deal to do with it. He must remembor that there is great virtue in charcoal and broken pots; for such materials, together with a little moss, form a thorough drainage. After that, the plant requires careful watering, but not so much so as one that has no drainage.

It is my firm opinion that all tropical plants should have the very same treatment as to drainage, with the exception of aquatics.

Mr. Henderson has had extensive practice in growing hard-wooded plants, as well as florists flowers, in Jersey City, but he has dispensed with the former, because they did not pay. I really believe it; for it is quite absurd to attempt to grow hard-wooded specimens without thoroughly drained pots. Mr. Buist, of Philadelphia, says in his book every now and then "drain your pots thoroughly."

Mr. H. advised me to place a thorough drained pot, say 8-inch or so, on the bare boards of the stage. I have done so; and find, by experience, that more than one-half of the water runs out, and at the same time can be seen air bubbles, as the water passes through the soil. Frequent watering carries down the gas of which the air is composed, to feed the roots of plants.-These bubbles could not be seen if there were no holes in the bottom of pots.

Mr. H. argues that pots with drainage deprive the plants of so much earth to feed upon. I maintain that such plants should have larger pots, as I am led to believe that the most useful roots of plants are near the surface, where they can have a liberal supply of atmospheric air, which is most beneficial to their growth. I maintain, also, that the same law holds good in the case of pots, as well as in the draining of land.

Allow me to make a few extracts from Johnston's Elements of Agriculture:

"The advantages that result from draining are manifold. The presence of too much water in the soil keeps it constantly cold. The heat of the sun's rays, which is intended by Nature to warm the land, is expended in evaporating the water from its surface, and thus the plants never experience that genial warmth about their roots, which so much favors their rapid growth, where too much water is present in the soil; also, that food of the plant which the soil supplies is so much diluted, that either a much greater quantity of fluid must be taken in by the roots, much more work done by them, that is, or the plant will be scantily nourished.

"The access of air is essential to the fertility of the soil, and to the healthy growth of most of our cultivated crops."

"The insertion of drains not only makes room for the air to enter, by removing the water, but actually compels the air to penetrate into the under parts of the soil, and renews it at every successive fall of rain. Open such outlets for the water below, and as it sinks and trickles away, it will suck the air after it, and draw it into the pores of the soil wherever itself has been."

I have made the above extracts to show Mr. Henderson the necessity of draining, and the benefit plants derive from it.

I appeal to the gardening community to express their views in the matter, as this will be my last on this subject.

FOWLS AROUND A COUNTRY HOME.

BY F. R. E.

The advantages and pleasing associations derived by having a cow and pig as part and parcel of the ruralist's homestead, have been portrayed by an able writer in the pages of this Magazine, and while he may gain all the favor of the men on his side in so advising, I think I will have the approval of the women, in asserting that the poultry yard should be attached to every home where half an acre of ground makes part and parcel thereof.

The advantages of fresh eggs—of having a fine fat bird to kill, when wanted,—together with the cheerful and life-like character given by the loud and shrill crow of the cock as he rolls out defiance to all the world in defence of his harem of full breasted, well-formed hens, decked in their flaunting garbs of colors, ranging from pure white, to sober shades of gray and brown, with perhaps an occasional sprinkling of black, are apparent to every housekeeper. Although a Horticulturist, with flowers and fruits around me, and where hens delight to bask, sun themselves and scratch, to the often annoyance of a lover of neat kept flower-borders, or an enthusiast in examining and testing some new strawberry, etc., yet after years of housekeeping, I could no more keep house without my Speckled Dorking fowls around me than without my flowers and fruits.

I name Speckled Dorkings, because having once had a regular course of the "Chicken fever," during which I paid fancy prices for Brahma Pootras, Buff, White and Black, Shanghaes, etc., etc., and tried nearly every breed of poultry, I have settled back to my first impression, viz: that taking all in all, the best breed of fowls is the Speckled or Colored Dorking. They are hardy, are good layers—do not roam or wander from their immediate roosting house as far as most other breeds, their eggs are more than medium size, the chicks come to a size fit for

the table sooner than any other breed, and when dressed are full, plump, and round in form, and, corresponding with their age, weigh more clear meat and less bone. I have, this past autumn, killed and dressed birds not quite four months old, that weighed four and one-half pounds after being thoroughly drawn.

As I have said, I could not keep house without having fowls around me, and this, I believe, would be the saying of nearly every country resident; yet how few think of the difference in value that might yearly be added by the keeping of some pure and well-formed breed of fowls, over the common dung-hill mixture so generally found, and that cost just as much to feed, but when dressed and weighed only weigh one-half to one third as much. The raiser of only fifty chickens a year will have gained nearly one hundred and fifty pounds of clear white meat, to say nothing of the pleasure derived from showing a flock of birds creditable to appreciative intelligence.

RUSKIN'S CLOUD AND TORRENT.

The most remarkable quality, perhaps, in Mr. Ruskin is his pure and earnest love of nature. Herein lies the charm of his works, which are so familiar to many of our readers. To this may be traced the main virtue there is in them, and the main utility they possess. They will send the painter more than ever to the study of nature, and perhaps they will have a still more beneficial effect on the art by sending the critic of painting to the same school.

Mr. Ruskin, in his love for Nature, brings forward and displays the palpable facts of Nature—the sky, the sea, the earth, the foliage, the clouds—which the painter has to represent. His descriptions are sometimes made somewhat indistinct by an exuberance of words; but there is a light in the haze—there is a genuine love and appreciation of Nature felt through them. And this is the essential point of sympathy, we take it, between Ruskin and his readers. We will illustrate this love of Nature by quoting a specimen or two of his happiest descriptions. We begin with the *Cloud*, and our readers will confess that their first feeling, after the perusal, will be an irresistible impulse to throw open the window, and look upon the clouds again as they roll through the sky.

"It is to be remembered that, although clouds of course arrange themselves more or less in broad masses, with a light side and a dark side, both their light and shade are invariably composed of a series of divided masses, each of which has in its outline as much variety and character as the great outline of the cloud; presenting, therefore, a thousand times repeated, all that I have described as the general form. Nor are these multitudinous divisions of a truth of slight importance in the character of sky, for they are dependent on, and illustrative of, a quality which is usually in a great degree overlooked—the enormous retiring spaces of solid clouds. Between the illuminated edge of a heaped cloud and that part of its body which turns into shadow, there will generally be a clear distance of several miles—more or less, of course, according to the general size of the cloud; but in such large masses as Poussin and others of the old masters, which occupy the fourth or fifth of the visible sky, the clear illuminated breadth of vapor, from the edge to the shadow, involves at least the distance of five or six miles. We are little apt, in watching the changes of a mountainous range of cloud, to reflect that the masses of vapor which compose it are huger and higher than any mountain-range of the earth; and the distance between mass and mass are not yards of air, traversed in an instant by the flying form, but valle of changing atmosphere leagues over; that the slow motion of ascending curves which we

can scarcely trace, is a boiling energy of exulting vapor rushing into the heaven a thousand feet in a minute; and that the topling angle whose sharp edge almost escapes notice in the multitudinous forms around it, is a nodding precipice of storms three thousand feet from base to summit. It is not until we have actually compared the forms of the sky with the hill-ranges of the earth, and seen the soaring alp overtopped and buried in one surge of the sky, that we begin to conceive or appreciate the colossal scale of the phenomena of the latter. But of this there can be no doubt in the mind of any one accustomed to trace the forms of cloud among hill ranges—as it is there a demonstrable and evident fact—that the space of vapor visibly extended over an ordinarily clouded sky, is not less, from the point nearest to the observer to the horizon, than twenty leagues; that the size of every mass of separate form, if it be at all largely divided, is to be expressed in terms of *miles*; and that every boiling heap of illuminated mist in the nearer sky is an enormous mountain, fifteen or twenty thousand feet in height, six or seven miles in illuluminated surface, furrowed by a thousand colossal ravines, torn by local tempests into peaks and promontories, and changing its features with the majestic velocity of a volcano."

The forms of clouds, it seems, are worth studying, and their study will richly repay the lover of nature. After reading this, no landscape painter will be disposed, with hasty slight invention, or with careless observation, to sketch these "mountains" of the sky. Let us see what he says of water, first of a falling stream, and then of running water:

"A little crumbling white or lightly-rubbed paper will soon give the effect of indiscriminate foam; but Nature gives more than foam—she shows, beneath it and through it, a peculiar character of exquisitely-studied form bestowed on every wave and line of fall; it is this variety of definite character which Turner always aims at, rejecting as much as possible everything that conceals or overwhelms it. Thus in the upper Fall of the Tees, though the whole basin of the fall is blue, and dim with the rising vapor, yet the attention of the spectator is chiefly directed to the concentric zones and delicate curves of the falling water itself; and it is impossible to express with what exquisite accuracy these are given. They are the characteristics of a powerful stream descending without impediment or break, but from a narrow channel, so as to expand as it falls. They are the constant form which such a stream assumes as it descends; and yet I think it would be difficult to point to another instance of their being rendered in art. You will find nothing even in the water-falls of our best painters, but springing lines of parabolic descent, and splashing and shapeless foam; and, in consequence, though they make you understand the swiftness of the water, they never let you feel the weight of it; the stream, in their hands, looks *active*, not *supine*, as if it leaped, not as if it fell. Now, water will leap a little way—it will leap down a weir or over a stone—but it *tumbles* over a high fall like this: and it is when we have lost the parabolic line, and arrived at the catenary—when we have lost the spring of the fall and arrived at the *plunge* of it—that we begin really to feel its weight and wildness. Where water takes its first leap from the top, it is cool and collected, and uninteresting and mathematical; but it is when it finds that it has got into a scrape, and has further to go than it thought for, that its character comes out; it is then that it begins to writhe, and twist, and to sweep out, zone after zone, in wilder stretching as it falls, and to send down the rocket-like, lance-pointed, whizzing shafts at its sides, sounding for the bottom. And it is this prostration, the hopeless abandonment of its ponderous power in the air, which is always peculiarly expressed by Turner.

When water, not in a very great body, runs in a rocky bed much interrupted by

hollows, so that it can rest every now and then in a pool as it goes along, it does not acquire a continuous velocity of motion. It pauses after every leap, and curdles about, and rests a little, and then goes on again; and if, in this comparatively tranquil and rational state of mind, it meets with any obstacles, as a rock or a stone, it parts on each side of it with a little bubbling foam, and goes round: if it comes to a stop in its bed it leaps it lightly, and then, after a little splashing at the bottom, stops again to take breath. But if its bed be on a continuous slope, not much interrrupted by hollows, so that it cannot rest—or if its own mass be so increased by flood that its usual resting-places are not sufficient for it, but that it is perpetually pushed out of them by the following current, before it has had time to tranquilize itself—it of course gains velocity with every yard that it runs; the impetus got at one leap is carried to the credit of the next, until the whole stream becomes one mass of unchecked accelerating motion. Now, when water in this state comes to an obstacle, it does not part at it, but clears it like a race-horse; and when it comes to a hollow, it does not fill it up, and run out leisurely at the other side, but it rushes down into it, and comes up on the other side, as a ship into the hollow of the sea. Hence, the whole appearance of the bed of the stream is changed, and all the lines of the water altered in their nature. The quiet stream is a succession of leaps and pools; the leaps are light and springy, and parabolic, and make a great deal of splashing when they tumble into the pool; then we have a space of quiet curling water, and another similar leap below. But the stream, when it has gained an impetus, takes the shape of its bed, never stops, is equally deep and equally swift everywhere, goes down into every hollow, not with a leap, but with a swing—not foaming nor splashing, but in the bending line of a strong sea-wave, and comes up again on the other side, over rock and ridge, with the ease of a bounding leopard. If it meet a rock three or four feet above the level of its bed, it will neither part nor foam, nor express any concern about the matter, but clear it in a smooth dome of water without apparent exertion, coming down again as smoothly on the other side, the whole surface of the surge being drawn into parallel lines by its extreme velocity, but foamless, except in places where the form of the bed opposes itself at some direct angle to the line of fall and causes a breaker; so that the whole river has the appearance of a deep and raging sea, with this only difference, that the torrent waves always break backwards, and sea waves forwards. Thus, then, in the water that has gained an impetus, we have the most exquisite arrangement of curved lines, perpetually changing from convex to concave, following every swell and hollow of the bed with their modulating grace, and all in unison of motion, presenting perhaps the most beautiful series of inorganic forms which nature can possibly produce."

GLAZED vs. UNGLAZED FLOWER POTS.

BY S. REID, PITTSFIELD, MASS.

I HAVE had an article on the above topic partly in and half out of my head for some time, but your correspondent, "B. S.," has taken all the thunder out of it. Well, thunder owes some of its impressiveness to echo; with echoes from them I will be contented.

The prejudice against glazed pots, we have had occasion to know, is very general. Offer a lady a glazed pot, and she will reply, "I wish I could use them, they are so much nicer and so much easier kept clean; but everybody says plants will not do as well in them," But who is this everybody? "O, I have asked Gen. A's gardener, and Col. B's gardener, and Judge C's gardener, and they all say plants do much better in unglazed pots, and that you can

not hire a gardener who knows anyth ng about his business to use a glazed pot. Is not this enough."

Well, let it pass.

We like early tomatoes, and to gratify this liking, we usually start the plants in pots the last of February, and have them in full bloom, and sometimes further advanced, by the time the open ground is sufficiently warm and dry to receive them. For pots, we use such refuse ones as come conveniently to hand, some glazed, some unglazed. Now, we have noticed, for a series of at least four or five years, that the plants in the glazed pots uniformly make the largest and most healthy growth. We allow the gardeners experiments to be just as reliable as our own. But the results are contradictory. The experiments are just like those for which agricultural and horticultural societies are paying thousands of dollars annually, and the results are the same—a bundle of contradictions. And such will be the case so long as the *circumstances*, the *very hinges on which results turn*, are neglected. "Half the truth is generally a lie" is an old maxim, and experiments with half the circumstances omitted give a lying result. We tried our experiments in a dry, stove-heated room, the water applied only to the surface of the earth; the gardener his, in a green-house, the watering, principally, by sprinkling foliage, pots, benches, stools, &c., with tepid water.—The air of the house is kept loaded with moisture, so that there is but little, if any, evaporation from the surface of the pot.—The air is as ready to give moisture to the pot as to ask it. The pot is not wanted to hold water, but simply to hold the earth, and keep the plant right side up. A gauze pot, had it firmness enough to do this, would answer quite well, while a glazed one would defeat the prime object—a uniform heat and moisture through the whole concern.

Step now, sir, to the sitting-room of any ordinary family—a room warmed by a stove, perhaps a coal stove, the air, the furniture, carpet, and walls are as dry as a piece of—anything you may please to compare them with. If a whiff of steam escape from any transient vessel of water, it is drank up instantly. Bring into this room, a plant in an unglazed, a porous pot, having the earth well wet; evaporation from the surface of the pot instantly begins; and such is the rapidity with which it goes on, that it almost freezes the very earth in the pot—for all know, or ought to know, that evaporation is a freezing process; that it is not the melting, but the drying that carries off the heat. In a short time the earth in contact with the pot becomes dry. In watering, especial care is taken to give the outer edge of the earth its full share, yet it is soon dry; and, although we are cautioned against too frequent watering, yet the drooping leaf will remind us that its outer, its fibrous roots are thirsty.

The pot in the sitting-room has a very different office from its fellow in the green-house. It is to hold moisture as well as earth, and prevent evaporation with the consequent chilling of the roots of the plant. The plant needs its protection.—Give the plant language, and you would hear it say, "This air is a thirsty old fellow; I give him drink from the surface of every leaf, but he is not satisfied. He comes into my kitchen, takes the water in which I mix my food, and in getting away with it, puts out my fire, and leaves me cold and dry. He should be taught to know his place."

The whole matter, then, lies here: A healthy growth of the plant requires a certain degree of heat and moisture, and this kept as uniform as possible. In the green-house, with its usual attending circumstances, this is best secured by porous pots; in the sitting-room, under very different circumstances, by pots not porous.

We feel very confident that, for parlor use, the hard, non-porous pot will give a healthier growth of the plant, keep itself much more neat and cleanly, be more durable, and ask for less care in watering, thus combining economy, beauty, and comfort

EDITOR'S TABLE.

To Contributors and Others.—Address all Communications, for the Editorial and publishing departments, to Geo. E. & F. W. Woodward, 37 Park Row, New York.

St. Catharines, C. W., 19 *Jan.* 1866.

Messrs. Geo. E. & F. W. Woodward.

Various matters requiring my attention have prevented my replying to your favor of 16th November last, relative to my humble experience in the cultivation of the Grape. Although always an enthusiastic Horticulturist I have only of late years turned my attention to Grape Culture and I am pleased to find that it is attracting so much attention in the Horticultural World, it is in my opinion a most delightful and profitable employment and in a very few years there will be as many varieties of grapes as there now are of apples and pears, I speak with reference to hardy varieties, or what are so called. Look at what already has been accomplished! Many can remember when the Isabella was the only grape cultivated and was considered the ne plus ultra of perfection, and now what a variety of Grape vines are offered for sale in every catalogue we take up, and I firmly believe that grape culture is only in its infancy in this country and that its cultivation is destined to be of great importance in the manufacture of native wine which is already attracting much attention. I have often been much amused at the elaborate articles, appearing from time to time in the different periodicals, relative to the management of grape vines, the necessary pruning required and the requisite ingredients to form a suitable soil, a great deal of which in my opinion, is quite unnecessary for the successful cultivation of the grape; no doubt a certain degree of knowledge is desirable, but the conclusion I have arrived at is, that we should leave more to nature and less to art, and if we paid more attention to top-dressing and less to the number of carcases deposited in our grape quarters, we should hear less of rot and other diseases to which grapes are liable. By making our borders too rich we stimulate the vines to unnatural growth, and we make the matter worse by taking off this luxuriant wood, and destroying the vigor of the vine. I notice in your December number that one of your correspondents, D. W. Adams, of Waukon, Alamakee county, Iowa, quite agrees with me, he says very pertinently "that the better they are treated, the worse they are diseased"—this subject I should like to see well discussed in your columns. I have been fortunate so far as rot is concerned, the only varieties on which I have seen it are the Curtis or Stetson's Hybrid (an early black grape similar to Blood's Black), badly touched, and Perkins and Concord slightly, Delaware also showed symptoms of the disease in a few berries. I much fear that under our present (in my opinion) erroneous system of pruning and manuring we shall see much more of it every season. I will now give you a list of such grapes as I have tested, and of my vines, as to their adaptability to our soil and climate, and their season of ripening in this part of Canada; the soil and climate of which, is very similar, to that of your famous Grape Valley, with the advantage of having water on both sides within a few miles of us. St. Catharines is situated at the base of the same range of hills, that run through that beautiful section of country, and is well described as the Garden of Canada.

The varieties I have hitherto tested, are as follows viz: Delaware, Rebecca, Diana, Union Village, Clara, Allen's Hybrid, Cassidy, Elsingburgh, Ontario, Louisa, Isabella, Canadian Chief, Taylor or Bullit, Lenoir,

Logan, Concord, Anna, Perkins, Black Cluster, Pelham Seedling, Secord, Catawba, Hartford Prolific, Curtis, Blood's Black, Tokalon, Rogers' 3, 4, 15, 19, 30, 33 and 41; I have also Lydia, Creveling, Worden's Seedling, Iona, Israella, Rogers 1, 2 and 9, Adirondac, Underhill's Seedling, Maxatawny, Cuyahoga, Alvey and some others whose names I do not remember, none of which are yet in bearing.

Of the above varieties Curtis, Blood's Black and Hartford Prolific and Rogers' number 3, ripen with us *the first week in September*, none of them are high flavored and are only valuable on account of their ripening early, the Curtis was badly affected with the rot; the next to ripen with us are Delaware, Logan, Allen's Hybrid, Concord, Rebecca, Elsingburg, Ontario, Alvey, Secord Perkins and Rogers' 4, 15 and 19 *all ripening about the middle of September.*

The last to ripen here are Isabella, Diana, Louisa, Union Village and Rogers' number 1, *the first week in October.*

The question now arises which of the above numerous varieties would I recommend for cultivation. This must depend in a great measure on soil and climate, our soils are various from sand to heavy clay, the climate generally dry and on that account well adapted to the grape.

For an early grape I would take Hartford Prolific or Rogers' number 3, of the next in order to ripen, Delaware, Allen's Hybrid, Concord and Rogers' 4, 15 and 19; and I should still cling to our old favorite the Isabella, and, where it will ripen, the Diana, which will become one of our best varieties or wine in favorable localities. I made a wine from it last season for which I received a diploma and first prize at our Provincial exhibition, it requires, however a warm exposure and is then a very delicious grape, perfectly hardy, standing our most severe winters, without protection and free so far from all disease, its only fault is that it grows too close on the bunch. Allen's Hybrid is the finest white grape we have for the table, but this year the flavor did not come up to the mark. Rogers' were all very fine and are destined, if they retain their present good qualities to form a new era in grape culture. Some varieties I have thrown out as worthless, viz., Taylor or Bullit and Lenoir, two *miserable wild sour things*, I cannot call them grapes, *the Anna, one of Dr. Grant's humbugs*, and I must here express my surprise that a man of his standing should send out such rubbish as this and devote *nearly two pages* of his catalogue to a description of this grape, and from which I was induced to purchase a vine now pulled up and thrown away after nursing it with great care for several years; it would be only occupying your pages unnecessarily to go over his description of its perfections, suffice it to say, that it is a *miserable flavorless thing* totally unfit for general cultivation. I had the Diana close to it ripening perfectly every season and I never had an eatable grape from the Anna, I can get any number of respectable people in this town to substantiate what I say. The Black Cluster and Pelham Seedling I have also discarded. We have lately formed a Grape Growers Association for the purpose of encouraging the growth of grapes and the manufacture of wine with every prospect of success, as we think we possess a soil and climate well adapted to the successful cultivation of the grape.

I fear gentlemen that I have wearied you with my rambling remarks, I shall be well repaid however, if they are the humble means of awakening a spirit of inquiry into the resources of, I may say, *our* country and in my opinion of its adaptability in many parts of it to grape growing.

Very truly yours

JAMES TAYLOR.

DR. SCHRŒDER'S METHOD.—MESSRS. EDITORS:—In the February number of the *Gardener's Monthly*, is a lecture by Dr. Schrœder upon the prevention of rot in Catawba vines, by continued layering, so as always to have fruit on new vines, and the author of the plan claims that it is a successful one.

He claims also, that he has discovered the law, that as vines get older they are more disposed to rot, a law of disease that does not seem to hold good with other fruits.

Whether this method of treatment is the true one or not, it is almost identical with a plan recommended for the prevention of mildew (in foreign grapes grown out of doors) by A. J. Downing, in *Hovey's Magazine*, volume V., page 121.

Speaking of a person who grows foreign grapes successfully out doors, Mr. Downing says:

"In the month of June, every year, he selects on every vine, a clean shoot, some five to eight feet in length, of which he buries about eighteen inches of the middle part, in the common method of layering. The plants in the vineyard are planted in rows, and the layers are made in the line of rows between the old plants.

The second year all the old plants are dug up and flung away, if they are not perfectly strong and vigorous. In this way he preserves a constant stock of strong, new vines, which are able, by their superior vigor, to resist the attacks of the mildew, and bear abundant and beautiful crops."

It will be seen that this plan, published in 1839, does not differ much from Dr. Schrœder's, and as we have Mr. Downing's assurance that it prevents mildew, there seems to be good reason to think that the Doctor's may prevent rot. If it does it will be a blessing, in spite of the labor it involves.

J. M. M., Jr.

Walpole, Mass.

Remedy for Mildew.—The moment of troubles for vine-growers and gardeners in general, by the oidium, is getting near, and I thought that some of your readers may read, with some interest, a remedy which is not new, but which proved, in every respect, satisfactory for years, and may, perhaps, not be generally known.

For a long time the application of flour of sulphur, in a dry state to plants, was recommended, and is still in use in many places, but has never answered completely.

Others recommend the application of flour of sulphur during a wet day, or after syringing the plants all over.

This also did not give full satisfaction. In 1852 the French Government recommended the following remedy—first proposed by a gentleman, M. Grisón, in the *Journal de la Société d'Horticulture Pratique de l'Ain:*

One pound of flower of sulphur, and one pound of slack lime, to which three quarts of water are added, gradually, by stirring the mixture; the whole put over a slow fire, and to remain boiling, stirring it until reduced to 2½ quarts.

The liquid, after the solid matter has deposited, is to be corked in bottles, and in case of want, mixed with one hundred times the quantity of rain water, and applied all over the plants, first before the buds open, and a second time before the blooming, and the cure generally is radical.

I have just applied this remedy, with full success, to a lot of roses which I intend to force. Three weeks ago they were all at once completely checked in their growth, and I could not detect the reason until the leaves commenced to drop. It was simply the oidium, which I cured in this way. There is not the least injury to be feared to any plants from it.

By E. A. Baumann, Rahaway, N.J.

Peaches South.—This month peach trees in our Southern States will do to bud. As soon as the bud starts, head off the top, and a growth of from three to four feet will be the result by autumn.

Trees transplanted this past Spring should be carefully looked over, and if they are not pushing strong will require perhaps more cutting back—perhaps mulching and watering. Thoroughly examine them, and attend to their wants in time.

Annuals should be carefully looked over this month, and if inclined to grow too rank or misshapen should have the ends nipped off. As they come into bloom thin out some of the weakly buds, and thereby assist the remaining ones to give you larger size flowers and brighter colors.

In transplanting annual flowers try and study their heights and colors so that as they come into bloom the flowers and foliage will blend harmoniously; as a rule, the dark colors to the centre or back ground, shading down to pure white for the margin.

Annual vines are usually trained on poles or cords, in cone, fan or other shaped forms; they are also made very attractive as masses when trained on a light wire or thread lattice, laid horizontally, about four inches from the ground. If several varieties are so trained together the effect is often very pleasing.

The American Cowslip—*Dodecatheon Meadia.*—Although a native, is none the less deserving a place in all the grounds, and is one of the few plants admirably adopted to shady borders. If to be grown from seeds, they should be gathered and sown as soon as ripe, in a sandy border, pot or frame, shaded from the south sun. If to be propagated by offsets, they should be taken off about the last of July and at once replanted in a shady border, of good, light, rich, sandy loam.

Cauliflower and Late Cabbage.—Seed sown early in this month will give good heads late in autumn. If severe weather comes on before all the cauliflowers head, they may be taken up and transplanted in good soil, in a light cellar or shed enclosure, where they will complete their growth nearly as well as in the open ground. Cabbage plants sown now for transplanting for winter use are much more reliable than plants already advanced. The heads of late cabbages are almost always firmer and keep better.

Wash for Bodies of Fruit Trees.—One ounce of copperas to eight or ten gallons of water forms a good wash, and is advised for trial as preventative against blight. One pound of bleachers soda and one gallon of water forms a wash that cleans off all insects, and leaves the trees with fresh young looking healthy bark.

Mulching or Shading Ground.—Not only does mulching the ground keep more uniform the temperature and moisture about the trees and plants, but it is acknowledged that the shade so obtained assists in a supply of fertilization. Now is the time, if you have not yet applied a mulch around your young trees, etc., to do it. Newly mown grass we have found one of the best, because it retained its place well, and gave no seeds to vegetate; but any litter will answer, or if saw-dust or tan bark are easily accessible, they make a durable and neat material.

Roses.—Remember, that to keep up a continuous blooming on Tea, Bengal and Bourbon roses, they require to have the blossoms removed, ere the petals fall, and that occasionally weak shoots require pinching back. Keep the ground always fresh and loose throughout the rose bed.

Remontant roses should have their first flower buds entirely removed; because at this time (June), there are abundance of roses, and because by so doing, the plants will form stronger, and more abundant buds to bloom a month hence. Layers should be put down the latter part of this month.

If buds occasionally force out on the bodies of your young trees, let them grow—do not rub them off—many trees are injured by exposure of a long bare trunk to summer and winter's suns—let the buds grow and thus form branches near to the ground, shielding by foliage, and adding to vigor and permanency of the tree.

THINNING FRUIT.—We might write page on page recounting experiments and results of thinning out fruit, but it would only be to prove that which all good fruit cultivators now concede—viz: that one-third to one-half in number of fruits, well distributed on the tree or vine, produce at maturity equal bulk, better quality, handsomer appearance, more satisfaction of mind to the grower, and finally yield in the market a greater pecuniary return.

The present and coming months call therefore for attention of fruit growers to this subject. All fruits on young and weakly spurs or twigs should be taken away, and clusters or groups so thinned, that while a supply of foliage will assist in maturing each distinct fruit or cluster, they may also be pretty evenly distributed over the tree or vine.

CHARRED TURFS form one of the best materials for cucumbers, melons, egg plants, annual flowers, etc., that we have ever tried. In growing we have used about a peck of char to each hill, and for our annual flowers a handful or so to each plant according to its vigor and habit.

RUSTIC BASKETS filled with Verbenas, Phloxdrummondi, etc., etc., form one of the prettiest as well as cheap decorations to small or large grounds. The Irish Ivy, Clematis, or Perriwinkle, each and all are good as a border to run over, and with their rich, green foliage soon hide the rough exterior, leaving the form of the basket, with its green surroundings, and its bright and cheery flowers to meet the eye. Baskets may be made with a few boards and strips of bark, or of wires, with twigs interwoven, or of wicker-work, with bark intertwined, and of form to please the taste.

SALVIAS, PETUNIAS, &c., when about to be planted out for summer blooming, in beds or borders, will have their bloom increased in quantity, and hastened in maturity, by laying the ball of roots from the pot on its side, and pegging down the branches.

GREENHOUSE PLANTS should be mostly placed out of doors this month. Geraniums and many others are the better for being cut back. In placing plants out of doors, try to have them so that they will be in shade soon after mid-day. This is especially a point of importance as we go farther south, where the heat of afternoon suns often nearly destroys the plants.

THE PEAR AND CHERRY SLUG may be easily destroyed by dusting them over with air-slacked lime. We usually go through our dwarf pear grounds about twice in a season, sowing broad cast air-slacked lime, at about the rate of four bushels to the acre, by which means we destroy the slug, and apply lime to the soil and wants of the pear. Some soils, we think, would perhaps be more benefitted by gypsum (plaster of paris), in place of lime, and the slug as effectively destroyed.

BEE MANAGEMENT.—We are no bee manager, and ourself can never approach one of the little workers without receiving from him a stinging hint that our room is what he wants, not our company. Nevertheless, we love the honey, and know many people who know more or less of hives. We have been reading, and from our readings gather the following as principles in their government:

To prevent their swarming, keep them moderately cool. Keep them constantly working by depriving them of most of their honey as it is produced. Never allow them to be starved for want of food; and never allow the larvæ to be reared in old cells.

RESERVE GARDENS.—Every garden of any pretension requires a piece of ground set apart for a reserve garden. Its advantages will be daily more and more apparent as the place grows older and older, until he who has been accustomed to its benefits will hardly know how to care for a place without such an apportionment, as part and parcel of a good place. Of some of the

advantages of a reserve garden, we may enumerate the starting at various times of annual seed, to bring forward and transplant in the border, just before their flowering period; for growing slips and cuttings of choice new plants; for starting bulbs in pots; for position and shielding of forcing-frames; for potting and shading of old plants that require a renewal, or young plants yet untested, or sickly and delicate plants. Many more items for the use of such a piece of ground could be stated; but we have said enough, we hope, to induce every owner of a garden, in planning his grounds, to provide for a reserve garden.

Training Trees.—While we do not advise the commercial fruit-grower to expend time in giving variety of form to his fruit trees by other means than the best practical use of the knife, yet we do like occasionally to see diversity of form produced by artificial methods, exhibiting skill and control of plant life in grounds of amateurs. Trees in fan shape bordering walks, with spreading flat tops, almost umbrella forms, on lawns, or some points or places where space is a part of the scenery, and elevation not admissible. This month is a good time to train and tie the branches, just before or about the time of forming the terminal buds. Many sorts of trees, those especially of a straggling habit of growth, can be not only improved in forms, but their bearing surfaces often enlarged and increased or improved in character.

Gardeners and amateurs can often, with a little labor and care, give additional interest and diversity to small extent of grounds by attention to this item of fancy form in training trees.

Strawberry Month.—June is unquestionably the strawberry month over a great part of our Union; and now, while they are in fruit, we shall feel obliged to our friends if they will send us notes of their observations

Destroy the Weeds.—It seems unnecessary ever to hint that weeds require often to be destroyed, in order to keep them down; but we find some cultivators are like the weeds, and require line upon line, in order to induce their action to that which will result only to their benefit.—June is essentially the month of flowers, and equally so of weeds; and if the weeds are taken when not more than an inch above ground, a mere brush with hoe or cultivator will destroy them rapidly and easily; whereas, if left until they are firmly fastened in the soil, a great amount of labor is needed to destroy them; and, besides, they have reduced and consumed a portion of the food in the soil designed for the valued crop.

Bulbs of hyacinth, tulip, crocus, &c., require to be lifted during the latter part of this, or fore part of the coming (July) month. Their position of exposure to sun, the soil, &c., will retard or hasten their maturity. When taken up, let them dry an hour or so in the sun, then lay away on shelves, in a cool but dry place. Some practice packing the bulbs, immediately on taking from the bed or border, in dry clean sand. Cut away all leaves, but do not injure any of the root fibres. Pack by laying the bulbs on their sides, and so that they will not touch each other.

Daphne-Mezereum.—Were the mezereon to be now first introduced, its early flowering and profusion of blossoms would cause a demand for it from far and wide, rich and poor. The plant is perfectly hardy; and a cluster of the pink and white varieties, with their profusion of fragrant blossoms in Spring, before any leaves expand, command the admiration of every one.—They may be easily grown from layers, cuttings, or seeds, and this is a good time for cuttings or layers. The seeds should be sown as soon as ripe. Light, sandy, loamy soil suits the Daphne-Mezereum best, but we have grown it well in clay loam underdrained.

Messrs. Editors.

A correspondent in the April Horticulturist alludes to Mr. Griffith's plan of raising grape vines from eyes in the open air, and I beg leave to say a word about raising vines without heat.

For the last two years, I have raised, for my own use, Concord, Diana, Rebecca, and Rogers' 15 and 19 vines, in an ordinary cold frame, without the least trouble.

Some Concord eyes, transplanted into the open ground in May, unsheltered, and never watered once, produced very stocky vines, with roots four feet long, and as large as a goose quill; and the same plants, last year, made canes, in the second season, as large as a man's finger. The Diana and Rebecca received rather more careful treatment, being kept in the frame all summer.

Some of the eyes were put into the frame in April, and some in May, and took care of themselves, with occasional waterings and a very little care—just enough to see that the young plants did not get burnt up.

Grapes lead naturally to strawberries, and I wish to ask:

1. Of what is La Constante a seedling, and what are the ancestors of the Agriculturist?

2. Where can exact and trustworthy information be found about the Chili strawberry, and the advertised varieties, viz.—Chili Orange, Vilmorin, &c.?

J. M. Merrick, Jr.

Walpole, Mass., March 31, 1866.

Messrs. Editors.—The article in Jan. number, "Discrepancies of Grape Culture," reminds me of a similar case:

A gentleman of a neighboring town was the owner of a swamp pasture lot. Part of the year this was covered with water. It is situated in a long, narrow valley. The soil a black muck, and quite deep. Through this field was cut several open ditches, through which the surface-water found its exit. With no other preparation of the land, save deep ploughing, the field was planted out to grape vines. They grew vigorously and healthy, and have been for some years in full bearing, and the crops they produce are really quite surprising—the vines hanging loaded with fruit. The variety is Isabella, but one would hardly recognize it. Bunch and berry are both unusually large; color deep, and fine bloom and quality of fruit—better than ordinary. Mildew does not in the least effect it. The experiment is a success.

It is a pretty conceit to call Nature a steady, reliable old Dame, and talk learnedly about "immutable laws." But facts, (and by many learned by costly experience), show, that when we try to chain her down to mathematical exactness—to make her work in a harness of our own fitting—she will sometimes play the coquette, bringing your carefully laid plans to utter disgrace, and then rewarding some blunderer with provoking success. The one studiously did wrong; the other accidentally did right. The fault often lies in trying to make Nature abide by man's laws; to make her produce like results under all circumstances, or what seem to be so to man. If sometimes she will grow better grapes in a swamp than on a sunny hill-side, plant in a swamp. Go with Nature, instead of trying to make her go with you. Bear good humoredly when her plans and yours don't happen to agree. Learn when she teaches, and you cannot help loving the dear old Dame better and better forever.

T. T. S.

Detroit, Mich., April 2, 1866.

Messrs. Woodward, 37 Park Row.

Gentlemen,—Enclosed find three dollars, for which send me one copy of colored plate of the Delaware Grape. In the Horticulturist for September 1863, you speak of the Yeddo Grape with great expectations. Has it been fruited, and is it suitable to this climate? Please give us more light on it. I have an amateur's collection of the reputed first class vines coming forward and wish to experiment with some foreign out-door kinds. A gentleman who has spent several years in China, tells me of a grape, which the same kind is much finer in the northern part of the empire than the

southern. The finest he saw was in 40° of latitude, and was called "Lang-yein Bee-tree," in Chinese—meaning "Dragon's Eye Grape," which with them was the highest name for excellence they could give it.

If it could be introduced here it might prove a valuable acquisition, and if the attention of the importers of seeds and plants from that part of the world was called to it, they might be induced to bring over some specimens. Let us hear some more from the Yeddo. Yours truly,

S. G. WIGHT, 503 Jeff Ave.

[HAS the Yeddo sunk into oblivion that we hear nothing about it of late? What says Mr. Parsons?—EDS.]

WE have received the following circular, which will, no doubt, prove interesting to many of our readers:—

PAINESVILLE, Ohio, March 20, 1866.

DEAR SIR:

At the annual meeting of the Lake Shore Grape Growers' Association, held in Cleveland the past month, the following preamble and resolutions were adopted:

"Whereas, the Emperor of the French has invited our Government to send to the approaching World's Exposition at Paris American products and works of art; and since it is our belief that the wines made in our country, especially in the regions embraced in this Association, will compare favorably with the best specimens produced in Europe,

Resolved, That we learn with great pleasure that one of our directors, Wm. Griffith, Esq., purposes attending the Paris Exhibition in 1867, and that we hereby appoint him our representative there, and request him to take in charge all specimens furnished by members of this Association.

Resolved, That we earnestly request all our members, and others interested, to forward specimens of native wine and brandy, for this purpose, to William Griffith or J. E. Mottier, South Shore Vineyards, North East, Pennsylvania.

Resolved, That we request Mr. Griffith to procure all the information he can obtain in regard to grape culture and wine making in his proposed tour in Europe, and report the same to this Association."

In behalf of the grape and wine interests of the United States, and in obedience to instructions of our Society, we beg leave to invite your co-operation in furtherance of the object of the above resolutions. Mr. Griffith is one of the most extensive and successful grape and wine producers in this country, and we take pleasure in recommending him as a gentleman every way competent and worthy to represent these interests at the Paris Exposition.

We, therefore, respectfully request you to send to him, for this purpose, specimens of wines made from native grapes, by yourself or others. The wines must be pure, free from addition of sugar, or other extraneous substance; at least two bottles of each variety, distinctly labelled, giving name of grape, location of vineyard, name and residence of maker, date, &c.; to be sent to William Griffith, North East, Pa., so as to reach there not later than 1st November, 1866, when they will be inspected and classified by a committee, consisting of L. F. Allen, of New York; J. A. Warder and Charles Carpenter, of Ohio; and J. E. Mottier and Wm. Griffith, of Pa.

For further particulars, address William Griffith, North East, Pa., who will be happy to answer all questions.

J. P. DAKE, President.

M. B. BATEHAM, Secretary.

FLUSHING, March, 1866.

EDITORS HORTICULTURIST.—The following extract from a letter received from a prominent lover of grape culture at Great Salt Lake City may not be uninteresting to your readers, as showing the adaptation of the climate of Utah to the culture of the vine. The letter is dated Sept. 12th, 1865, and says:

"I received from you quite a variety of foreign grapes some years ago, through the

Post Office. Among them were Buckland Sweetwater, White Frontignan, Chasselas de Fontainbleau, &c., all very fine; and all *ripe here now in the open air.* I pulled one bunch from the former ten days ago, weighing 3 lbs., less two ounces, and yesterday two bunches, together weighing 4¼ pounds, all from one vine, in the open air, and it had perhaps *fifty pounds more* on."

It is certainly one inducement to emigrate to Mormondom if one can have these delicious varieties of grapes arrive at such perfection in the open air.

Yours truly,

PRINCE & Co.

BOOKS, &c., RECEIVED.

GRAPE-GROWING AND WINE-MAKING, by George Husmann, Hermann, Missouri. G. E. & F. W. Woodward, publishers, 37 Park Row, New York. Price, $1.50.

A new and practical work, fully illustrated, treating of the propagation, training, and culture of the native vine, both in the vineyard and garden, with a carefully prepared list of those varieties which, after extensive trial, are found free from disease, and adapted to our wants.

Also, thorough and comprehensive directions for wine-making, with illustrations of all the various instruments and utensils used in the manufacture.

Mr. Husmann has here given the results of his experience of many years in the culture of the vine and in wine-making, in such a clear and concise manner, that all may understand the various processes.

MINIATURE FRUIT GARDEN, by Thomas Rivers, from the thirteenth *English edition.* Orange, Judd & Co., publishers, 41 Park Row, New York. Price $1.

This work has already passed through thirteen editions in England, which fact would seem to be a sufficient guarantee of its worth. The author is a well-known practical nurseryman and fruit-grower, and, we may add, has met with great success in his mode of culture. In the work before us, we have a thorough system of pruning and training to induce fruitfulness at an early age, and also to keep the trees within such narrow bounds that a large number may be grown within the limits of an ordinary garden.

ESSAYS ON SOILING CATTLE, by Josiah Quincy, with a Memoir of the Author, by Edmund Quincy. A. Williams & Co., publishers, 100 Washington Street, Boston.—Price, $1.

The subject of soiling cattle, as it is called—that is, feeding them upon green food in sheds or stalls, instead of allowing them to roam at will in pastures—is attracting considerable attention among our farming community, especially near large cities and towns, where farms are small, and the value of land great. The author shows most conclusively, from his own experience, that there is great economy in the practice, and that our small farmers may, by adopting this system, be enabled to keep as much stock as the possessor of a hundred acres upon the old system.

SIX LECTURES ON AGRICULTURE, by Mr. George Ville. A. Williams, Boston. Price 30 cents. Translated from the French by Chas. Martel.

Scientific Essays on the chemical constituents of soils, and the crops grown upon them, with results of experiments made to ascertain what properties of the soil are taken up by the growth of certain crops; with suggestions as to the proper elements to be returned to exhausted lands to renew their fertility.

THE BOOK OF ROSES, by Francis Parkman. J. E. Tilton & Co. Publishers. Boston. Price $3.

The author of this elegant volume will be remembered by our readers as a frequent contributer to the pages of the HORTICULTURIST during the past year, and is well known as a skilful cultivator, as well as an accomplished writer. Mr. Parkman has given us in this book much useful information, which if followed, cannot fail to ensure success in the cultivation of this queen of flowers. Explicit directions for culture, both in the open air and in pots, for greenhouse

and parlor decoration are fully given, as well as the various operations of planting, pruning and training, with lists of the best varieties in their respective classes. The book is a valuable addition to any horticultural library, and an elegant ornament for the drawing-room table.

CULTURE OF THE GRAPE, by W. C. Strong. J. E. Tilton & Co. Publishers, Boston Mass. Price, $3.

Grape culture is attracting much attention in our country, and more especially in those portions of it, where experiments have demonstrated the adaptability of the soil and climate. The most casual reader of Horticultural and Agricultural periodicals cannot fail to notice the frequent articles upon the grape, and if he turns to the advertising pages, he will perhaps wonder where can be found purchasers for the immense number of vines for sale; and yet all are sold without difficulty. Now and then a new book upon the subject appears, which cultivators hail with delight, hoping to obtain more information.

In the book before us, we have the Grape very thoroughly treated, from the propagation of the vine through the various systems of training, until the fruit is ripened and marketed or consumed, with full remarks on diseases and insects The work is not claimed to be entirely original; the author acknowledging himself indebted to numerous writers in our horticultural monthlies for practical suggestions. This is a valuable feature in the work, as much time will be thereby saved to the reader, by having the experience of many collected in one volume.

Mr. Strong devotes but little space to culture under glass, and still less to wine-making. Much more might have been said on both these topics without making the book too voluminous.

BRECK'S NEW BOOK OF FLOWERS, by Joseph Breck. Orange Judd & Co. Publishers, 41 Park Row, New York. Price $1 75.

The first edition of this work was published fifteen years ago—the last in 1856,—since which time it is almost needless to say, to those of our readers who have kept pace with floriculture, that a vast number of new plants have been introduced to their notice. Much of the book has been re-written, incorporating only those portions of the old editions, where no improvement could be made. About one hundred pages have been added, and the culture of flowers brought down to the present time.

INDIAN CORN. Its value, culture and uses, by Edward Enfield. D. Appleton & Co. Publishers, New York. Price $1 75.

Heretofore no work has been published exclusively devoted to the culture of this most important staple crop. We may say that almost every farmer, however few the number of his acres, finds place for his corn patch, and yet how few cultivate it well enough to obtain the yield that the land is capable of producing. To endeavor to instruct his readers in the proper mode of culture and harvesting the corn and stalks, is the author's aim in this work, and he has succeeded in giving much desirable information in a pleasing style.

DE LA VERGNE'S SULPHUR BELLOWS.—We are prepared to furnish this instrument, which is used so successfully in France and Germany for the destruction of mildew on the grape vine and other plants. Any pulverized substance can be thrown by it either upon the under or upper side of leaves of plants. Price $3 50.

We have received a large supply of English publications on the subject of Agriculture, Horticulture, Landscape Gardening, and Architecture, and are prepared to import to order books on any subjects on the most favorable terms. See advertisement of English books in this number.

Secretaries of State and county agricultural societies are requested to send their last reports, or information to where they may be had to Messrs J. E. Tilton & Co., Boston, Mass.